



R. Dollhopf
EPA Region 5 Records Ctr.



351582

MEMORANDUM

TO: Ralph Dollhopf, On-Scene Coordinator
United States Environmental Protection Agency
9311 Groh Road, Room 316
Grosse Isle, Michigan 48138-1697

Deborah Orr, Remedial Project Manager
United States Environmental Protection Agency
77 W. Jackson Boulevard (SE-4J)
Chicago, Illinois 60606-3590

FROM: Scott Lockhart, P.E.
Project Manager

DATE: July 8, 1999 *SPU*

RE: Toledo Tie Treatment Site, Monthly Project Report
KMC001.100.0081

The following summary is prepared pursuant to Section V, Item 3.5, of the Unilateral Administrative Order (UAO) issued to Kerr McGee Chemical, LLC (KMC) on December 24, 1997.

WORK PERIOD:

June 1, 1999 to June 30, 1999

SIGNIFICANT DEVELOPMENTS:

1. IT Group prepared for the re-installation of Frenchmens Road.
2. Olander Construction installed the 74-inch diameter pipe 1038 linear feet from Arco Drive with a junction chamber installed at the connection with the two 48-inch culverts beneath Arco Drive
3. IT group began dismantling the water treatment system.
4. On-site meeting with representatives of various utilities was held on June 16, 1999 to discuss coordination of utility restoration. Attendees included Ameritech, Columbia Gas and MCI World Com. Toledo Edison contacted and advised of schedule.
5. IT Group disposed of removed Frenchmens Road asphalt and base materials at BFI, Vienna Junction Landfill, a sub-title D facility.
6. IT Group began the de-mobilization of equipment and tools.

PROBLEMS:

1. The Land Disposal Restriction (LDR for F034 waste became effective at 12:01 am May 12, 1999. Not all material that was considered waste had been removed from the site at this time. Approximately 10 to 15 truckloads (230-345) tons remain in an on-site stockpile in the load out area. KMC and IT continue to evaluate off-site treatment and disposal options.
2. Delays in pipe delivery and longer than expected execution of installation pushed back completion of this part of the project about one week. Did not affect overall completion schedule significantly.

ANALYTICAL DATA:

1. Analytical data for the samples from the water treatment system.
2. Analytical data for soil samples collected from material excavated from Williams Ditch for installation of the spillway at the 74" pipe outlet and from temporary clay dams used to contain stormwater during pipe installation.

CORRESPONDENCE:

1. Weekly reports from KMC to US EPA documenting site activities. The reports were dated June 7 and 16, and July 1, 1999.
2. Monthly report for May, 1999 activities to U.S. EPA, dated June 10, 1999.
3. Correspondence to Ohio EPA regarding modification of water treatment system sampling schedule.

ANTICIPATED ACTIVITIES NEXT PERIOD:

1. IT Group will complete the transportation and disposal of remaining hazardous and non-hazardous materials from the Site.
2. IT Group sub-contractor will complete the re-installation of Frenchmens Road.
3. IT Group will complete final grading activities over the backfilled excavation areas and the backfilled 74-inch diameter pipe.
4. IT Group and HAI will de-mobilize personnel and equipment upon the completion of the time critical removal project.

ct: A. Keith Watson, Project Manager, Kerr-McGee (w/enclosure)
Peter Goetz, Project Coordinator, Kerr-McGee (w/enclosure)
W. O. Green III, Esq., Kerr-McGee
Chris Schraff, Esq., Porter, Wright, Morris & Arthur
Micheal McClary, Associate Regional Counsel
Cedric Gibson, Ecology and Environment, Inc.

ANALYTICAL RESULTS FOR THE EXCAVATED SPILLWAY MATERIAL AND TEMPORARY CLAY DAMS IN WILLIAMS DITCH

	SPILLWAY MATERIAL STOCKPILE (SPW- 001)	SPILLWAY MATERIAL PILE INDUSTRIAL RATIO	IMPORTED CLAY, DAM AT SUMP (SCD- 001)	SUMP CLAY DAM INDUSTRIAL RATIO	IMPORTED CLAY, DOWNSTREAM CONTAINMENT DAM (CCD-001)	CONTAINMENT CLAY DAM INDUSTRIAL RATIO	COMMERCIAL VAP STANDARD	INDUSTRIAL VAP STANDARD
Benzo(a)pyrene	<0.28 (trace)	-	<.30 (trace)	-	<.32 (trace)	-	3.20	3.10
Dibenzo(a,h)anthracene	<0.06 (trace)	-	ND	-	ND	-	3.20	3.10
Benzo(a)anthracene	0.33	0.01	<.30 (trace)	-	<.32 (trace)	-	32.00	31.00
Indeno(1,2,3-cd)pyrene	ND	-	ND	-	ND	-	32.00	31.00
Benzo(k)fluoranthene	<0.28 (trace)	-	<.30 (trace)	-	<.32 (trace)	-	320.00	310.00
Naphthalene	0.17	0.00	0.17	0.00	0.22	0.00	24000.00	22000.00
Arsenic	6.40	0.07	8.20	0.10	8.20	0.10	110.00	86.00
Chromium	16.10	0.01	16.10	0.01	18.20	0.01	2900.00	2800.00
		0.09		0.10		0.10		

* Chromium (VI) Standard

Concentrations listed are mg/kg on a dry weight basis.

Note: TCLP Analysis (per 40 CFR Part 261.24) and ICR run on a composite of SCD-001 and CCD-001. Separate TCLP analysis performed on sample SPW-001. Results indicate non-hazardous by characteristic.

R. D. Bellhop



JONES & HENRY LABORATORIES, INC. / 2567 TRACY ROAD, NORTHWOOD, OHIO 43619 / (419) 666-0411

June 16, 1999

To: Hull & Associates
3401 Glendale Ave., Suite 300
Toledo, Ohio 43614
ATTN: Mr. Bill Petruzzi

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AD16296 Location code: HULLKMC
Project account code: 196
Location Description: KMC001-SCD-001-T392
Sample collector: CLIENT Sample collection date: 06/04/99
Lab submittal date: 06/04/99 Time: 15:40
Received by: RS Validated by: FD

Parameter: SOLIDS, DRY, 104 DEG C
Method reference: SM17-2540G
Result: 84.0 % MDL or sensitivity: 0.01
Date started: 06/08/99 Date finished: 06/09/99
Time started: Analyst: JC

Parameter: ARSENIC
Method reference: 200.7/6010
Result: 8.2 mg/dry kg MDL or sensitivity: 2.0
Date started: 06/14/99 Date finished: 06/14/99
Time started: Analyst: VW

Parameter: CHROMIUM
Method reference: 200.7/6010
Result: 16.1 mg/dry kg MDL or sensitivity: 2.0
Date started: 06/14/99 Date finished: 06/14/99
Time started: Analyst: VW

Parameter: POLYNUCLEAR AROMATICS
Method reference: EPA 8270 Unit: mg/dry kg
Result: see below
Date started: 06/08/99 Date finished: 06/08/99
Time started: Analyst: JR

Data for POLYNUCLEAR AROMATICS mg/dry kg:

Component Name	Result	Component MDL
ACENAPHTHENE	0.35	0.15
ACENAPHTHYLENE	Not detected	0.15
ANTHRACENE	0.27	0.15
BENZO(a)ANTHRACENE	<0.30 (trace)	0.30

Hull & Associates Sample I.D. AD16296 (continued)
Page: 2
June 15, 1999

Data for POLYNUCLEAR AROMATICS (continued):

Component Name	Result	Component MDL
BENZO(b)FLUORANTHENE	Not detected	0.37
BENZO(k)FLUORANTHENE	<0.30 (trace)	0.30
BENZO(a)PYRENE	<0.30 (trace)	0.30
BENZO(ghi)PERYLENE	Not detected	0.15
CHRYSENE	0.39	0.15
DIBENZO(ah)ANTHRACENE	Not detected	0.07
FLUORANTHENE	1.2	0.30
FLUORENE	0.32	0.15
INDENO(1,2,3-cd)PYRENE	Not detected	0.15
NAPHTHALENE	0.17	0.15
PHENANTHRENE	1.3	0.07
PYRENE	0.93	0.15
Surrogate results:	---	
5.92 mg/dry kg 2-Fluorobiphenyl	2.92	
5.92 mg/dry kg Nitrobenzene-D5	4.93	
5.92 mg/dry kg Terphenyl-D14	4.64	

If there are any questions regarding this data, please call.


Fred W. Doering
President



JONES & HENRY LABORATORIES, INC. / 2567 TRACY ROAD, NORTHWOOD, OHIO 43619 / (419) 666-0411

June 16, 1999

To: Hull & Associates
3401 Glendale Ave., Suite 300
Toledo, Ohio 43614
ATTN: Mr. Bill Petruzzi

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AD16297 Location code: HULLKMC
Project account code: 196
Location Description: KMC001-CCD-001-T392
Sample collector: CLIENT Sample collection date: 06/04/99
Lab submittal date: 06/04/99 Time: 15:40
Received by: RS Validated by: FD

Parameter: SOLIDS, DRY, 104 DEG C
Method reference: SM17-2540G
Result: 80.0 % MDL or sensitivity: 0.01
Date started: 06/08/99 Date finished: 06/09/99
Time started: Analyst: JC

Parameter: ARSENIC
Method reference: 200.7/6010
Result: 8.2 mg/dry kg MDL or sensitivity: 2.0
Date started: 06/14/99 Date finished: 06/14/99
Time started: Analyst: VW

Parameter: CHROMIUM
Method reference: 200.7/6010
Result: 18.2 mg/dry kg MDL or sensitivity: 2.0
Date started: 06/14/99 Date finished: 06/14/99
Time started: Analyst: VW

Parameter: POLYNUCLEAR AROMATICS
Method reference: EPA 8270 Unit: mg/dry kg
Result: see below
Date started: 06/08/99 Date finished: 06/08/99
Time started: Analyst: JR

Data for POLYNUCLEAR AROMATICS mg/dry kg:


Component Name	Result	Component MDL
ACENAPHTHENE	0.33	0.16
ACENAPHTHYLENE	Not detected	0.16
ANTHRACENE	0.43	0.16
BENZO(a)ANTHRACENE	<0.32 (trace)	0.32

Hull & Associates Sample I.D. AD16297 (continued)
Page: 2
June 16, 1999

Data for POLYNUCLEAR AROMATICS (continued):

Component Name	Result	Component MDL
BENZO(b)FLUORANTHENE	0.51	0.40
BENZO(k)FLUORANTHENE	<0.32 (trace)	0.32
BENZO(a)PYRENE	<0.32 (trace)	0.32
BENZO(ghi)PERYLENE	Not detected	0.16
CHRYSENE	0.38	0.16
DIBENZO(ah)ANTHRACENE	Not detected	0.08
FLUORANTHENE	1.5	0.32
FLUORENE	0.40	0.16
INDENO(1,2,3-cd)PYRENE	Not detected	0.16
NAPHTHALENE	0.22	0.16
PHENANTHRENE	1.0	0.08
PYRENE	1.1	0.16
Surrogate results:	---	
6.36 mg/dry kg 2-Fluorobiphenyl	4.00	
6.36 mg/dry kg Nitrobenzene-D5	5.47	
6.36 mg/dry kg Terphenyl-D14	5.22	

If there are any questions regarding this data, please call.


Fred W. Doering
President



Hull &
Associates, Inc.

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FAX: (513)459-9869

4949 Galaxy Parkway, Suite S
Warrensville Heights, Ohio 44128
Phone: (216)514-7100
FAX: (216)514-7104

REPORT TO: Scott Lockhart

Client: KERR-McGEE

Site: Toledo TIE Treatment Site.

Project#: KMC-001 Phase: OL SMP

Samplers: ILM

PRESERVATIVES

ANALYSES

SAMPLE MATRIX

1. WATER
2. SOIL
3. SLUDGE
4. OIL
5. TISSUE
6. SEDIMENT

OTHER:

PRESERVATIVES

- A - Cool only, <
- B - HNO_3 pH<2
- C - H_2SO_4 pH<
- D - NaOH pH>1
- E - ZnAcetate +
- F - $\text{Na}_2\text{S}_2\text{O}_3$ (0.1
- G - HCl pH <2

METALS
F - FILTERED
N - NOT FILTERED
B - BOTH

All samples are kept at 4°C.

PAH'S 8270C
AS, CR. (total)

[illegible]

RELINQUISHED BY:

DATE: 6-4-99

RECEIVED BY:

DATE: 1-4-94

RELINQUISHED BY:

DATE: - -

RECEIVED BY:

DATE: - -

RELINQUISHED BY:

DATE: 12-4-55

RECEIVED FOR LAB BY:

DATE: 6-4-77

COOLER TEMPERATURE
AS RECEIVED °C :

30.0

DISTRIBUTION:

WHITE —LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW —LAB USE
PINK —RETAINED BY HAI

RETURNED WITH REPORT)

Deliver To: T & H Lab

Method of Delivery: Hand

Airbill Number:

NOTES: * Preserve Some material in 2nd container
for possible future analytical
(TCLP, ICR)



JONES & HENRY LABORATORIES, INC. / 2567 TRACY ROAD, NORTHWOOD, OHIO 43619 / (419) 666-0411

June 23, 1999

To: Hull & Associates
3401 Glendale Ave., Suite 300
Toledo, Ohio 43614
ATTN: Mr. Bill Petruzzi

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AD16001	Location code: HULLKMC
Project account code: 196	
Location Description: KMC001-SPW001-T392	
Sample collector: CLIENT	Sample collection date: 06/01/99
Lab submittal date: 06/01/99	Time: 14:38
Received by: SA	Validated by: FD

Parameter: SOLIDS, DRY, 104 DEG C
Method reference: SM17-2540G
Result: 87.2 %
Date started: 06/07/99
Time started:

MDL or sensitivity: 0.01
Date finished: 06/08/99
Analyst: WS

Parameter: ARSENIC
Method reference: 200.7/6010
Result: 6.4 mg/dry kg
Date started: 06/09/99
Time started:

MDL or sensitivity: 2.0
Date finished: 06/09/99
Analyst: VW

Parameter: CHROMIUM
Method reference: 200.7/6010
Result: 16.1 mg/dry kg
Date started: 06/09/99
Time started:

MDL or sensitivity: 2.0
Date finished: 06/09/99
Analyst: VW

Parameter: POLYNUCLEAR AROMATICS
Method reference: EPA 8270
Result: see below
Date started: 06/08/99
Time started:

Unit: mg/dry kg
Date finished: 06/09/99
Analyst: JR

Parameter: pH @ 25 DEG C, 20g+20ml @ 60 min
Method reference: EPA9045
Result: 10.90 Std.
Date started: 06/18/99
Time started:

MDL or sensitivity: 1.00
Date finished: 06/18/99
Analyst: WS

June 23, 1999

Parameter: CYANIDE

Method reference: 4500-C/335.3

Result: Not detected

Date started: 06/15/99

Time started:

Unit: mg/kg

MDL or sensitivity: 1.0

Date finished: 06/16/99

Analyst: CF

Parameter: SULFIDE, REACTIVE

Method reference: SW846IC77342

Result: Not detected

Date started: 06/14/99

Time started:

Unit: mg H₂S/kg

MDL or sensitivity: 50

Date finished: 06/14/99

Analyst: CF

Parameter: IGNITABILITY

Method reference: 40CFR261.21

Result: See comment

Date started: 06/22/99

Time started:

Unit:

MDL or sensitivity:

Date finished: 06/22/99

Analyst: CF

Parameter: TCLP ZERO HEADSPACE EXTRACTION

Method reference: EPA 1311

Result: Completed

Date started: 06/14/99

Time started:

Unit:

MDL or sensitivity:

Date finished: 06/15/99

Analyst: JC

Parameter: TCLP NON-VOLATILE EXTRACTION

Method reference: EPA 1311

Result: Completed

Date started: 06/14/99

Time started:

Unit:

MDL or sensitivity:

Date finished: 06/15/99

Analyst: JC

Parameter: TCLP ARSENIC

Method reference: EPA 6010B

Result: Not detected

Date started: 06/22/99

Time started:

Unit: mg/L

MDL or sensitivity: 0.1

Date finished: 06/22/99

Analyst: VW

Parameter: TCLP BARIUM

Method reference: EPA 6010B

Result: 0.7 mg/L

Date started: 06/22/99

Time started:

MDL or sensitivity: 0.2

Date finished: 06/22/99

Analyst: VW

Parameter: TCLP CADMIUM

Method reference: EPA 6010B

Result: Not detected

Date started: 06/22/99

Time started:

Unit: mg/L

MDL or sensitivity: 0.01

Date finished: 06/22/99

Analyst: VW

Parameter: TCLP CHROMIUM

Method reference: EPA 6010B

Result: Not detected

Date started: 06/22/99

Time started:

Unit: mg/L

MDL or sensitivity: 0.1

Date finished: 06/22/99

Analyst: VW

June 23, 1999

Parameter: TCLP LEAD
 Method reference: EPA 6010B Unit: mg/L
 Result: Not detected MDL or sensitivity: 0.1
 Date started: 06/22/99 Date finished: 06/22/99
 Time started: Analyst: VW

Parameter: TCLP MERCURY
 Method reference: EPA7470 Unit: mg/L
 Result: Not detected MDL or sensitivity: 0.004
 Date started: 06/21/99 Date finished: 06/21/99
 Time started: Analyst: AA

Parameter: TCLP SELENIUM
 Method reference: EPA 6010B Unit: mg/L
 Result: Not detected MDL or sensitivity: 0.1
 Date started: 06/22/99 Date finished: 06/22/99
 Time started: Analyst: VW

Parameter: TCLP SILVER
 Method reference: EPA 6010B Unit: mg/L
 Result: Not detected MDL or sensitivity: 0.1
 Date started: 06/22/99 Date finished: 06/22/99
 Time started: Analyst: VW

Parameter: TCLP VOLATILES
 Method reference: 80-10.20,15 Unit: mg/L
 Result: see below
 Date started: 06/15/99 Date finished: 06/15/99
 Time started: Analyst: ND

Parameter: TCLP SEMIVOLATILES
 Method reference: EPA8270 Unit: mg/L
 Result: see below
 Date started: 06/15/99 Date finished: 06/15/99
 Time started: Analyst: JR

Parameter: TCLP HERBICIDES
 Method reference: EPA8150 Unit: mg/L
 Result: see below
 Date started: 06/17/99 Date finished: 06/21/99
 Time started: Analyst: JR

Data for POLYNUCLEAR AROMATICS mg/dry kg:

Component Name	Result	Component MDL
ACENAPHTHENE	<0.14 (trace)	0.14
ACENAPHTHYLENE	<0.14 (trace)	0.14
ANTHRACENE	0.64	0.14
BENZO(a)ANTHRACENE	0.33	0.28
BENZO(b)FLUORANTHENE	<0.35 (trace)	0.35
BENZO(k)FLUORANTHENE	<0.28 (trace)	0.28
BENZO(a)PYRENE	<0.28 (trace)	0.28
BENZO(ghi)PERYLENE	Not detected	0.14

June 23, 1999

Data for POLYNUCLEAR AROMATICS (continued):

Component Name	Result	Component MDL
CHRYSENE	0.38	0.14
DIBENZO(ah)ANTHRACENE	Not detected	0.07
FLUORANTHENE	0.99	0.28
FLUORENE	0.17	0.14
INDENO(1,2,3-cd)PYRENE	Not detected	0.14
NAPHTHALENE	0.17	0.14
PHENANTHRENE	0.46	0.07
PYRENE	0.74	0.14
Surrogate results:	---	
5.56 mg/dry kg 2-Fluorobiphenyl	3.74	
5.56 mg/dry kg Nitrobenzene-D5	4.27	
5.56 mg/dry kg Terphenyl-D14	4.56	

Data for TCLP VOLATILES mg/L:

Component Name	Result	Component MDL
BENZENE	Not detected	0.05
CARBON TETRACHLORIDE	Not detected	0.05
CHLOROBENZENE	Not detected	0.05
CHLOROFORM	Not detected	0.05
1,4-DICHLOROBENZENE	Not detected	0.05
1,2-DICHLOROETHANE	Not detected	0.05
1,1-DICHLOROETHENE	Not detected	0.05
METHYL ETHYL KETONE	Not detected	0.05
TETRACHLOROETHENE	Not detected	0.05
TRICHLOROETHENE	Not detected	0.05
VINYL CHLORIDE	Not detected	0.02
Surrogate results, HALL detector:	---	
0.750 mg/L 1-Cl-2-fluorobenzene	0.686	
0.750 mg/L 1,4-Dichlorobutane	0.720	
0.750 mg/L 2-Br-1-chlorobenzene	0.812	
Surrogate results, PID detector:	---	
0.750 mg/L 1-Cl-2-fluorobenzene	0.769	
0.750 mg/L 2-Br-1-chlorobenzene	0.822	

Data for TCLP SEMIVOLATILES mg/L:

Component Name	Result	Component MDL
CHLORDANE	Not detected	0.02
o-CRESOL	Not detected	0.4
m+p-CRESOL	Not detected	0.4
1,4-DICHLOROBENZENE	Not detected	0.2
2,4-DINITROTOLUENE	Not detected	0.07
ENDRIN	Not detected	0.005
HEPTACHLOR	Not detected	0.004
HEPTACHLOR EPOXIDE	Not detected	0.004
HEXACHLOROBENZENE	Not detected	0.05
HEXACHLOROBUTADIENE	Not detected	0.1
HEXACHLOROETHANE	Not detected	0.1

June 23, 1999

Data for TCLP SEMIVOLATILES (continued):

Component Name	Result	Component MDL
g-BHC (LINDANE)	Not detected	0.01
METHOXYCHLOR	Not detected	0.01
NITROBENZENE	Not detected	0.1
PENTACHLOROPHENOL	Not detected	0.4
PYRIDINE	Not detected	0.2
TOXAPHENE	Not detected	0.04
2,4,5-TRICHLOROPHENOL	Not detected	0.4
2,4,6-TRICHLOROPHENOL	Not detected	0.4
Surrogate results:	---	
0.267 mg/L 2-Fluorobiphenyl	0.130	
0.267 mg/L 2-Fluorophenol	0.189	
0.267 mg/L Nitrobenzene-D5	0.187	
0.267 mg/L Phenol-D6	0.166	
0.267 mg/L Terphenyl-D14	0.174	
0.267 mg/L 2,4,6-Tribromophenol	0.147	

Data for TCLP HERBICIDES mg/L:

Component Name	Result	Component MDL
2,4-D	Not detected	0.10
2,4,5-TP (SILVEX)	Not detected	0.02
Surrogate result:	---	
0.085 mg/L 2,4-Dichlorophenylacetic acid	0.102	

Sample comments:

This sample does not ignite in the presence of an open butane flame.

Per your request of June 14, 1999, this sample was analyzed for TCLP and other RCRA parameters. The sample was reported previously on June 11, 1999.

If there are any questions regarding this data, please call.


Fred W. Doering
President

☐ Dublin

Boleto

☐ **Maroon**☐ Warrensylle Heights

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Phone: (614)793-8777
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4848 Galaxy Parkway, Suite S
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Phone: (216) 514-7100
FAX: (216) 514-7104

REPORT TO: Scott Lockhart

Client: KERR-McGEE

Site: ~~km~~ Toledo Tie Treatment Site

Project#: KMC-001 Phase: 01.3MP

Samplers: ILM

PRESERVATIVES

ANALYSES

SAMPLE MATRICES

1. WATER
2. SOIL
3. SLUDGE
4. OIL
5. TISSUE
6. SEDIMENT
OTHER:

PRESERVATIVES

A - Cool only, $< 4^{\circ}\text{C}$
 B - HNO_3 pH <2
 C - H_2SO_4 pH <2
 D - NaOH pH >12
 E - $\text{ZnAcetate} + \text{NaO}$
 F - $\text{Na}_2\text{S}_2\text{O}_3$ (0.008%)

MEIN 9

- FILTERED
- NOT FILTERED
- BOTH

All samples are kept at 4°C.

FILTERED
 NOT FILTERED
 BOTH

PAH: 2270C
 AS, Cr (Total)

[illegible]

RELINQUISHED BY:

DATE: 6-01-99

RECEIVED BY:

DATE: 6/1/77

RELINQUISHED BY:

DATE: - ' -

RECEIVED BY:

DATE: - -

RELINQUISHED BY:

DATE: - -

RECEIVED FOR LAB BY:

DATE: 6-7-99

COOLER TEMPERATURE
AS RECEIVED °C :

2.0 °C

DISTRIBUTION:

WHITE —LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW —LAB USE
PINK —RETAINED BY HM

Deliver To: J & H Lab

Method of Delivery: HAND

Airbill Number:

NOTES: * Hold 2nd Contingency For
Possible Future Analytical
(TCLP, ICR)



JONES & HENRY LABORATORIES, INC. / 2567 TRACY ROAD, NORTHWOOD, OHIO 43619 / (419) 666-0411

June 25, 1999

Composite
clay
dam: piles

To: Hull & Associates
 3401 Glendale Ave., Suite 300
 Toledo, Ohio 43614
 ATTN: Mr. Bill Petruzzi

Post-it® Fax Note 7671

Date	6/26	# of pages	4
To	Scott Lockhart		
From	Jan		
Co./Dept	Hull		
Co.	JAL		
Phone #			
Fax #	385-5487		

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AD17044

Location code: HULLKMC

Project account code: 196

Location Description: Soil composite

Sample collector: CLIENT

Sample collection date: 06/04/99

Lab submittal date: 06/04/99

Time: 15:40

Received by: RS

Validated by: FD

Parameter: pH @ 25 DEG C, 20g+20ml @ 60 min

Method reference: EPA9045

Result: 7.57 Std.

MDL or sensitivity: 1.00

Date started: 06/18/99

Date finished: 06/18/99

Time started:

Analyst: WS

Parameter: CYANIDE

Method reference: 4500-C/335.3

Result: Not detected

Unit: mg/kg

MDL or sensitivity: 1.0

Date started: 06/17/99

Date finished: 06/18/99

Time started:

Analyst: CF

Parameter: IGNITABILITY

Method reference: 40CFR261.21

Result: See comment

Unit:

MDL or sensitivity:

Date started: 06/22/99

Date finished: 06/22/99

Time started:

Analyst: CF

Parameter: SULFIDE, REACTIVE

Method reference: SW846IC77342

Result: Not detected

Unit: mg H₂S/kg

MDL or sensitivity: 50

Date started: 06/22/99

Date finished: 06/22/99

Time started:

Analyst: CF

Parameter: TCLP ZERO HEADSPACE EXTRACTION

Method reference: EPA 1311

Result: Completed

Unit:

MDL or sensitivity:

Date started: 06/17/99

Date finished: 06/18/99

Time started:

Analyst: AA

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Parameter: TCLP NON-VOLATILE EXTRACTION

Method reference: EPA 1311

Result: Completed

Date started: 06/17/99

Time started:

Unit:

MDL or sensitivity:

Date finished: 06/18/99

Analyst: AA

Parameter: TCLP ARSENIC

Method reference: EPA 6010B

Result: Not detected

Date started: 06/22/99

Time started:

Unit: mg/L

MDL or sensitivity: 0.1

Date finished: 06/22/99

Analyst: VW

Parameter: TCLP BARIUM

Method reference: EPA 6010B

Result: 0.6 mg/L

Date started: 06/22/99

Time started:

MDL or sensitivity: 0.2

Date finished: 06/22/99

Analyst: VW

Parameter: TCLP CADMIUM

Method reference: EPA 6010B

Result: Not detected

Date started: 06/22/99

Time started:

Unit: mg/L

MDL or sensitivity: 0.01

Date finished: 06/22/99

Analyst: VW

Parameter: TCLP CHROMIUM

Method reference: EPA 6010B

Result: Not detected

Date started: 06/22/99

Time started:

Unit: mg/L

MDL or sensitivity: 0.1

Date finished: 06/22/99

Analyst: VW

Parameter: TCLP LEAD

Method reference: EPA 6010B

Result: Not detected

Date started: 06/22/99

Time started:

Unit: mg/L

MDL or sensitivity: 0.1

Date finished: 06/22/99

Analyst: VW

Parameter: TCLP MERCURY

Method reference: EPA7470

Result: Not detected

Date started: 06/21/99

Time started:

Unit: mg/L

MDL or sensitivity: 0.004

Date finished: 06/21/99

Analyst: AA

Parameter: TCLP SELENIUM

Method reference: EPA 6010B

Result: Not detected

Date started: 06/22/99

Time started:

Unit: mg/L

MDL or sensitivity: 0.1

Date finished: 06/22/99

Analyst: VW

Parameter: TCLP SILVER

Method reference: EPA 6010B

Result: Not detected

Date started: 06/22/99

Time started:

Unit: mg/L

MDL or sensitivity: 0.1

Date finished: 06/22/99

Analyst: VW

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Parameter: TCLP VOLATILES
Method reference: 80-10,20,15
Result: see below
Date started: 06/18/99
Time started:

Unit: mg/L

Date finished: 06/18/99

Analyst: ND

Parameter: TCLP SEMIVOLATILES
Method reference: EPA8270
Result: see below
Date started: 06/23/99
Time started:

Unit: mg/L

Date finished: 06/23/99

Analyst: JR

Parameter: TCLP HERBICIDES
Method reference: EPA8150
Result: see below
Date started: 06/18/99
Time started:

Unit: mg/L

Date finished: 06/25/99

Analyst: JR

Data for TCLP VOLATILES mg/L:

Component Name	Result	Component MDL
BENZENE	Not detected	0.05
CARBON TETRACHLORIDE	Not detected	0.05
CHLOROBENZENE	Not detected	0.05
CHLOROFORM	Not detected	0.05
1,4-DICHLOROBENZENE	Not detected	0.05
1,2-DICHLOROETHANE	Not detected	0.05
1,1-DICHLOROETHENE	Not detected	0.05
METHYL ETHYL KETONE	Not detected	0.05
TETRACHLOROETHENE	Not detected	0.05
TRICHLOROETHENE	Not detected	0.05
VINYL CHLORIDE	Not detected	0.02
Surrogate results, HALL detector:		
0.750 mg/L 1-Cl-2-fluorobenzene	0.626	
0.750 mg/L 1,4-Dichlorobutane	0.641	
0.750 mg/L 2-Br-1-chlorobenzene	0.733	
Surrogate results, PID detector:		
0.750 mg/L 1-Cl-2-fluorobenzene	0.777	
0.750 mg/L 2-Br-1-chlorobenzene	0.801	

Data for TCLP SEMIVOLATILES mg/L:

Component Name	Result	Component MDL
CHLORDANE	Not detected	0.02
o-CRESOL	Not detected	0.4
m+p-CRESOL	Not detected	0.4
1,4-DICHLOROBENZENE	Not detected	0.2
2,4-DINITROTOLUENE	Not detected	0.07
ENDRIN	Not detected	0.005
HEPTACHLOR	Not detected	0.004
HEPTACHLOR EPOXIDE	Not detected	0.004
HEXACHLOROBENZENE	Not detected	0.05

Hull & Associates Sample I.D. AD17044 (continued)

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Data for TCLP SEMIVOLATILES (continued):

Component Name	Result	Component MDL
HEXACHLOROBUTADIENE	Not detected	0.1
HEXACHLOROETHANE	Not detected	0.1
γ-BHC (LINDANE)	Not detected	0.01
METHOXYCHLOR	Not detected	0.01
NITROBENZENE	Not detected	0.1
PENTACHLOROPHENOL	Not detected	0.4
PYRIDINE	Not detected	0.2
TOXAPHENE	Not detected	0.04
2,4,5-TRICHLOROPHENOL	Not detected	0.4
2,4,6-TRICHLOROPHENOL	Not detected	0.4
Surrogate results:	---	
0.267 mg/L 2-Fluorobiphenyl	0.165	
0.267 mg/L 2-Fluorophenol	0.245	
0.267 mg/L Nitrobenzene-D5	0.236	
0.267 mg/L Phenol-D6	0.242	
0.267 mg/L Terphenyl-D14	0.176	
0.267 mg/L 2,4,6-Tribromophenol	0.189	

Data for TCLP HERBICIDES mg/L:

Component Name	Result	Component MDL
2,4-D	Not detected	0.10
2,4,5-TP (SILVEX)	Not detected	0.02
Surrogate result:	---	
0.085 mg/L 2,4-Dichlorophenylacetic acid	0.099	

Sample comments:

This sample does not ignite in the presence of an open butane flame.

Complete ID: KMC001-SCD-001-T392/KMC001-CCD-001-T392 Composite.

If there are any questions regarding this data, please call.

Fred W. Doering
President